

reporters of isolated cases (most of them fatal) who have done the most to discredit it. We are sure that we only reflect the opinion of fair-minded men when we say that if vaginal hysterectomy is to obtain a foot-hold, it must become for a time a little less fashionable. Let it be confined to a few skillful, conscientious surgeons and then we shall be able to arrive at something like a fair estimate of its value. It is not an operation for the general practitioner. There should be a division of labor in this department, as well as in that of abdominal surgery.

H. C. COE.

ON THE USE OF INJECTIONS OF AN ETHEREAL SOLUTION OF IODOFORM IN THE TREATMENT OF COLD ABSCESES.

At the late session of the French Congress of Surgery, Professor Verneuil, of Paris, enthusiastically recommended the use of iodoform dissolved in ether as an injection into the cavities of cold abscesses. In the *Revue de Chirurgie* for May, 1885, he gives full details of his method of procedure, with a brief statement of the theoretical ideas upon which the treatment is based. He calls attention first to the fact that it is not so much the fluid contained in these abscesses as it is the abscess-wall in dealing with which therapeutic measures are called for. This wall he would divide into two layers; an external, of irritative origin, but without specific character, and which, with the subsidence of irritation, quickly contracts and spontaneously disappears; an internal, in which is concealed the cause of the disease, the parasitic tuberculous germ.

This internal layer, or parietal tuberculous dépôt is then the part which, if a cold abscess is to be cured, must be destroyed in some way, rapidly or slowly, by operative or therapeutic measures. Rapid destruction by operative measures, Verneuil considers to be inconvenient and dangerous, while often unreliable and sometimes impossible. Iodoform, however, he believes to be a parasiticide whose power to destroy tubercular matter is well demonstrated, so that it presents itself as a therapeutic agent, benign, efficient and of easy application.

It is true, however, that this agent is toxic in certain doses and conditions, so that it is necessary to seek for those proportions in which it might be introduced into an abscess cavity, and be efficient in destroying the virulence of the internal layer without producing toxic phenomena. It is to be considered also, whether if, in place of using a strong, and consequently somewhat dangerous solution, success might not be obtained as well by the use of weak and harmless solutions on condition that they are left in prolonged contact with the parasite.

For carrying with certainty into the most distant parts, and into every minor irregularity of cavities of such varying extent and irregularity as those of cold abscesses, a vehicle is needed particularly diffusible. For such a purpose ether seems better adapted than any other liquid, while, in addition, it possesses the advantages of cheapness, is devoid of toxic properties, and is everywhere attainable. When an injection of an ethereal solution is made, the ether is vaporized and quickly absorbed and the iodoform is deposited as an impalpable powder in a uniform layer upon the whole extent of the abscess wall.

The method of use, as advised by the author, is to first evacuate the abscess by aspiration. He makes use of a large sized trocar, uses as little manipulation as possible, stops as soon as the liquid is a little blood-stained, abstains from any washing out of the cavity, and proceeds at once to make the injection with the iodoformized ether. He uses a five per cent solution, and injects at the maximum not more than 100 grammes, generally 50 or 60 grammes suffices. Thus the amount of iodoform left to be absorbed never exceeds 4 or 5 grammes. The absorption both of the ether and of the iodoform seems to be effected very slowly. Scarcely has the injection reached the cavity before it swells up and regains dimensions equal to, if not greater than it had before the operation. Percussion shows this to be due to the sudden vaporization of the ether. The sonority persists several days, sometimes for quite a week. Gradually a regained flatness shows that the ether vapor has disappeared.

However large the quantity of ether injected, Verneuil has never seen any exciting, anæsthetic or narcotic effect referable to rapid entrance of the ether into the circulation.

The prolonged persistence of the iodoform in the suppurative focus

is not less certain. Appreciable traces of it have been found even at the end of five months. Should we have to deal with an immense abscess, such as those that extend from the thorax to the middle of the thigh, the sac might be at first emptied by a simple puncture and the iodoform injected later, when it may have become partly refilled. Moreover, the risks of poisoning would certainly be escaped, if, as everything indicates, the prolonged action of the medicament produces the same effects as its great concentration; if, that is to say, the tuberculous matter can be neutralized as well by leaving in contact with it small quantities of iodoform, as by destroying it outright with large quantities. In the use of weak solutions, several repetitions of the injection may be necessary. According to V.'s experience a cure may be expected after from two to four injections on an average, when the cavities are large and the solution is a weak one. Such repeated applications do not prolong the duration of the treatment much more than the more bloody methods of operating. In their favor, also, is the fact that within a few days after this minor operation, a patient can resume his occupation.

One may avoid also the two dangers, of too strong doses on the one hand and of too weak on the other. In abscesses of small dimensions, as for example not to exceed the volume of a large orange, a strong solution could be injected, as for instance 20 grammes of ether, charged with 4 grammes of iodoform—a 20 per cent solution. By leaving these 4 grammes of iodoform in such a cavity the immediate destruction of the parasite, and in consequence a rapid cure could be expected.

In deep and capacious abscesses, repeated injections must be made; but, in order not to prolong indefinitely the treatment, it would be well to know what intervals ought to occur between the successive injections. This has not yet been definitely settled, although, *a priori*, it seems useless to renew the supply of the parasiticide as long as it is not exhausted; this would plead for rare séances. On the other hand, as soon as the pus has lost its specific character, it would be an advantage to extract it rather than to leave to nature this task, always prolonged, of absorbing it. This would suggest the emptying of the sac as soon as the destructive mission of the iodoform has been accom-

plished. The author appreciates the difficulty of arriving at any exact determination of the time when either the iodoform is all absorbed, or the abscess has lost its specific character. He suggests no way of getting over this difficulty, but proceeds to say that the intervals at which the injection shall be repeated may be left to the discretion of the surgeon. The operation is so devoid of danger, and so simple that it might be repeated every month, on an average, without inconvenience.

Professor Verneuil, in conclusion, apologizes for giving so much prominence to so simple a therapeutic procedure. One of the chief motives which has actuated him, he says, is his desire to protest against a tendency to bloody surgery which he believes to exist at the present time. Every one can treat a cold abscess by iodoformized injections. There is required only a syringe, a solution, and a degree of skill not exceeding that needed for the common operation for hydrocele. The author believes the method to possess the three requisites of efficiency, safety, facility.

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